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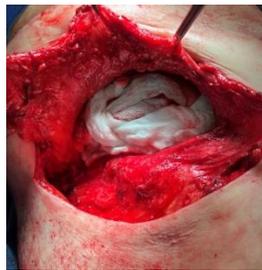
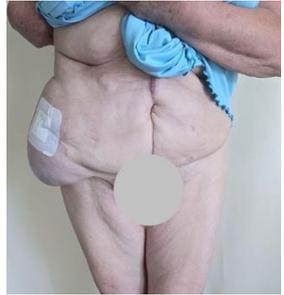
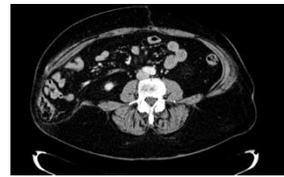
Reconstruction of the right side of the abdominal wall due to post-traumatic muscle avulsion

Aim:

Traumatic detachment of the lateral abdominal muscle group from the iliac crest is a rare and challenging condition resulting from blunt force trauma. This study aims to present a novel surgical technique for managing such defects, focusing on the use of macroporous mesh fixation to the iliac crest with a ProTack stapler.

Materials and Methods:

A 67-year-old female patient sustained a traumatic abdominal wall defect following a motor vehicle collision. The diagnosis was based on physical examination and computed tomography, which identified a defect above the iliac crest measuring 36x54 mm. Initial emergency surgery addressed abdominal organ injuries, but secondary complications led to hernia formation. Twelve months post-injury, definitive repair was undertaken. Using a transverse incision, the hernia sac was dissected and reduced. A preperitoneal space was created, and a 26x28 cm macroporous mesh was placed and secured to the iliac crest using a ProTack stapler. The lateral abdominal muscles were reattached to the mesh to restore anatomical continuity.



Results:

Postoperative recovery was uneventful. Subcutaneous drainage was maintained for 9 days, and a hernia belt was prescribed for 6 weeks. The patient was discharged on the third postoperative day, achieving primary wound healing and satisfactory functional and aesthetic outcomes. During a 12-month follow-up period, no hernia recurrence or complications were observed.

Conclusions:

Traumatic detachment of lateral abdominal muscles is a rare and complex condition requiring individualized management. The described technique, involving mesh fixation to the iliac crest with a ProTack stapler, demonstrates safety and efficacy. Further experimental studies are needed to optimize fixation methods and establish evidence-based guidelines for these challenging cases.